

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

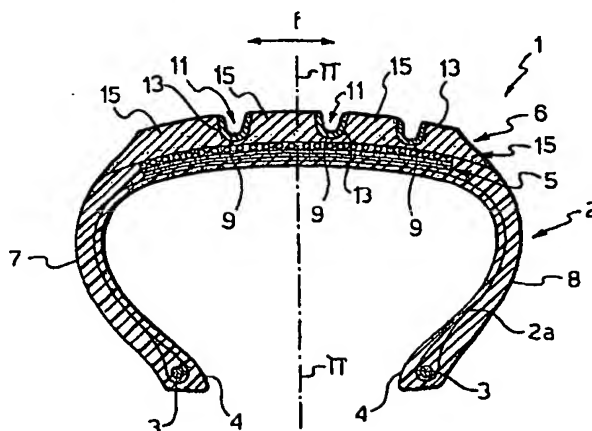
PCT

(10) International Publication Number
WO 2005/063508 A1

- (51) International Patent Classification⁷: **B60C 11/18** (74) Agents: **BOTTERO, Claudio** et al.; Porta Ceccacci & Associati S.p.A., Via Trebbia, 20, I-20135 Milano (IT).
- (21) International Application Number: **PCT/IT2003/000866** (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date:
30 December 2003 (30.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant (*for all designated States except US*): **PIRELLI PNEUMATICI S.P.A.** [IT/IT]; Viale Sarca, 222, I-20126 Milano (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **BOIOCCHI, Maurizio** [IT/IT]; c/o Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT). **MATRASCIA, Giuseppe** [IT/IT]; c/o Pirelli Pneumatici S.p.A., Viale Sarca, 222, I-20126 Milano (IT).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report

[Continued on next page]

(54) Title: TIRE FOR VEHICLES



(57) **Abstract:** A pneumatic tire (1) is described comprising: a carcass structure (2) having at least one carcass ply (2a), and at least one annular reinforcing structure (3) associated to said carcass ply (2a), a pair of axially opposite side walls (7, 8) on the carcass structure (2), a belt structure (5) arranged at a radially outer position with respect to the carcass structure (2) and a tread band (6), arranged at a radially outer position with respect to the belt structure (5), and generally consisting of a first elastomeric material incorporating at least one portion substantially consisting of a second elastomeric material; wherein the tread band (6) comprises at least one groove (11) defined in the at least one portion substantially consisting of the second elastomeric material; wherein the ratio between the modulus of elasticity (E') under compression at 100°C of the second elastomeric material and the modulus of elasticity (E') under compression at 100°C of the first elastomeric material is not lower than about 1.30; and wherein the ratio between the IRHD hardness at 100°C of the second elastomeric material, measured in accordance with standard ISO 48, and the IRHD hardness at 100°C of the first elastomeric material, measured in accordance with standard ISO 48, is lower than about 1.10.

WO 2005/063508 A1